

# **Report on South Carolina Electric & Gas Company's Annual Request for Revised Rates**

**A Publication of the South Carolina Office of Regulatory Staff**

**2009-211-E**

**July 30, 2009**



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## INTRODUCTION

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This document contains the South Carolina Office of Regulatory Staff's ("ORS") Report on South Carolina Electric & Gas Company's ("SCE&G" or "Company") Annual Request for Revised Rates ("ARRR") filed in Public Service Commission of South Carolina ("Commission") Docket No. 2009-211-E.

On May 30, 2008, SCE&G applied under the Base Load Review Act ("BLRA") to the Commission for a Base Load Review Order to construct and operate two 1,117 net MegaWatt ("MW") nuclear generating facilities, Units 2 & 3, (the "Units") to be located at the V.C. Summer Nuclear Station site near Jenkinsville, South Carolina. The anticipated net dependable capacity from the Units will be approximately 2,234 MW, of which 55% (1,228 MW) will be available to serve SCE&G customers. Santee Cooper will receive 45% (1,006 MW) of the electric output when the Units are in operation and will pay 45% of the capital and operating costs of the Units.

A hearing in this matter was held between December 1st and December 17th, 2008. The Commission subsequently issued a Base Load Review Order ("Commission Order No. 2009-104(A)" or "Commission Order") on March 2, 2009.

Pursuant to S.C. Code Ann. §58-33-280 of the BLRA, SCE&G may file with the Commission annual requests for revised rates as long as the project is being constructed in accordance with the construction schedules and cumulative cost forecasts approved in Commission Order No. 2009-104(A). Pursuant to the BLRA, until a nuclear plant enters commercial operation, the rate adjustments related to the plant include recovery only of the weighted average cost of capital applied to the outstanding balance of construction work in progress ("CWIP") and shall not include depreciation or other items constituting a return of capital to the utility. SCE&G utilized the CWIP balance forecasted as of June 30 - the date specified by SCE&G in its application for a Base Load Review Order. Exhibit C of the ARRR sets forth the capital structure and weighted average cost of capital estimated as of June 30, 2009. Exhibit D of the ARRR sets forth an increase in retail rates totaling approximately \$22,533,000, based on the projected outstanding balance of CWIP of \$199,201,000 through June 30, 2009.

Pursuant to the BLRA, SCE&G may request revised rates no earlier than one year after the request of a Base Load Review Order. SCE&G filed its ARRR with the Commission on Friday, May 29, 2009. Although the filing occurred on Friday, May 29, 2009, it was made effective May 30, 2009, the anniversary date of SCE&G's application for the Base Load Review Order. SCE&G has indicated its intent to file future ARRRs annually with an effective date of May 30.

Pursuant to the BLRA, ORS has two months to examine SCE&G's ARRR and to file with the Commission a report indicating the results of its examination. ORS has examined SCE&G's ARRR to determine the filing's compliance with the BLRA and the Commission Order. The ORS Report will discuss the items below in the order they appear:

- **CWIP REVIEW**
- **SUMMARY OF EXPENDITURE EXAMINATION PROCEDURES**
- **ORS ATTACHMENT – 1 DETAIL**
- **CAPITAL STRUCTURE**
- **ALLOCATION OF ADDITIONAL REVENUE REQUIREMENT**
- **RATE DESIGN**
- **REVENUE VERIFICATION**
- **ORS'S REVIEW OF SCE&G'S QUARTERLY REPORT**
- **BUDGET REVIEW**
- **CONCLUSION**
- **ORS ATTACHMENT – 1**
- **ORS ATTACHMENT – 2**
- **ORS ATTACHMENT - 3**

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## **CWIP REVIEW**

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ORS's examination of the ARRR was focused primarily on actual CWIP expenditures recorded during the period, July 1, 2008, through June 30, 2009, together with the associated revenue requirement and AFUDC calculations. The results of ORS's examination of the ARRR and the underlying financial records through June 30, 2009, are contained in ORS Attachment - 1.

The purpose of the examination was to verify:

- That the actual capital expenditures reflected in the Company's filing were complete, accurate, and supported by the books and records of the Company;
- That those actual costs were properly allocated between SCE&G and its co-owner, Santee Cooper, and accurately assigned to the cost categories set forth in the base load application;
- That the Company's gross cost of capital as of June 30, 2009, was calculated accurately and supported by the books and records of the Company; and
- That the Company's calculations of the Allowance for Funds Used During Construction ("AFUDC") were accurate and properly reflected in the CWIP balance at June 30, 2009.

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## **SUMMARY OF EXPENDITURE EXAMINATION PROCEDURES**

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The key steps performed are summarized below:

- Interviewed key accounting personnel within SCE&G New Nuclear Deployment to gain an understanding of the accounting team make-up and the major processes.
- Toured the construction facility to provide ORS with a visual frame of reference.
- Obtained invoice-level listings of all charges to CWIP during the period.
- Selected samples of invoice items to test in detail, including inter-departmental cross-charges. Verified the mathematical accuracy of sampled invoices and related support, and verified that each was incurred during the review period.
- Verified, through analysis of the supporting documentation, that expenditures were properly classified as to resource code and appropriately charged to the work order.
- Verified that recorded capital expenditures were supported by adequate documentation, were recorded in the proper month and were coded into the construction cost categories

as set forth in the Base Load Review application. Invoices from the Engineering, Procurement and Construction (“EPC”) contractors (typically the largest expenditures) were verified against the EPC contract, and escalation amounts were recalculated for accuracy using the appropriate inflation indices.

- Gained an understanding of the Company’s construction account coding string, including their use of resource and activity codes to capture related charges, base EPC charges, escalations, etc.
- Obtained from the Company detailed cost roll-forward schedules; tested them to ensure the ending CWIP balance from June 30, 2008, together with incremental costs incurred during the review period, supported the reported balance at June 30, 2009, both in total and by cost category, including the costs of transmission projects tracked on separate work orders, but included in CWIP.
- Determined for the sample months of March through June, 2009, that the ending CWIP totals reconciled properly to general ledger detail, and in the case of March, 2009, that the balance also agreed with the Company’s published Schedule 10-Q as filed with the Securities & Exchange Commission.
- Verified on a sample of EPC items, that payments had actually been made to the vendor by examining bank drafts and wire transfer acknowledgements.
- Documented the construction invoice approval process, and traced a sample of EPC items to payment vouchers noting the string of required approvals were present.
- Performed a test of payroll expenditures charged to the project, noting that a sample of employees’ gross pay was supported by the payroll department records, that hours charged appeared to be properly allocated to the project, and that charges reconciled to the general ledger detail.
- Verified the Company’s monthly calculation of AFUDC, ensuring the appropriate incremental costs, debt and equity rates were included and supported the ending AFUDC balance included in CWIP of \$4,557,000 at March 31, 2009.
- Recalculated the AFUDC for the period April 1, 2009 through June 30, 2009 as \$1,855,000 using actual CWIP expenditures in lieu of the projected amounts reflected in the ARRR. Total AFUDC of \$6,412,000 was calculated for the period under examination.

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## **ORS ATTACHMENT - 1 DETAIL:**

### **REVENUE REQUIREMENT AND CWIP THROUGH JUNE 30, 2009**

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ORS Attachment - 1 shows the CWIP included in rates as of June 30, 2008, incremental additions to CWIP and AFUDC for the review period, and total CWIP as of June 30, 2009. The attachment's format is designed to reflect "SCE&G's Revised Rates Filing" projected CWIP as compared to both the "Actual" CWIP per book amount, and the maximum "Allowable" CWIP. All amounts presented on ORS Attachment - 1 reflect the Company's expenditures after allocation of costs attributable to Santee Cooper.

Column (A) reflects SCE&G's CWIP projected through June 30, 2009, of \$265,162,000, and incremental CWIP for the review period of \$199,201,000. Utilizing this incremental CWIP balance and the projected gross cost of capital, the Company's projected incremental revenue requirement per the request was \$23,546,000 in total, or \$22,533,000 after applying the retail allocation factor of 95.70%.

Column (B) presents Actual CWIP through June 30, 2009, as verified by ORS examination, totaling \$272,975,000. Incremental actual CWIP for the review period was \$207,014,000.

Column (C) reflects the Allowable CWIP through June 30, 2009, computed as \$264,325,000. Incremental allowable CWIP for the review period was \$198,364,000. The revised rate structure results in an increased gross cost of capital and an increase in the revenues requested by the Company when calculated on the CWIP balance on June 30, 2009. The resultant revenue increase exceeds the amount in SCE&G's ARRR.

Column (D) calculates the differences between Columns (A) and (B). The difference in incremental CWIP shown in the "SCE&G Revised Rates Filing" column versus the "Actual" column of (\$7,813,000) represents the amount by which actual capital expenditures exceeded the Company's projections.

Column (E) calculates the differences between Columns (B) and (C). The difference in incremental CWIP presented in the Actual figures versus the Allowable column was \$8,650,000. This indicates that the actual, audited CWIP per the Company books is more than ORS deems

allowable for this review period. The remainder should be carried forward into the Company's next revised rate filing.

ORS Attachment - 1 was prepared in compliance with recognized accounting and regulatory procedures.

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## **CAPITAL STRUCTURE**

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SCE&G submitted its capital structure as of March 31, 2009-Adjusted in Exhibit C of its ARRR filing. The capital structure included a planned \$62,000,000 equity transfer and an estimated planned transfer from stock plans of \$20,000,000.

The Company supplied ORS the actual capital structure as of June 30, 2009. The June 30, 2009, update is important as SCE&G chose June 30 as the appropriate date for establishing revised rates in Docket No. 2008-196-E. Consistent with S.C. Code Ann. §58-33-220, the cost of capital has been updated as of June 30 in order to better match SCE&G's cost of capital to its actual investment in CWIP through June 30, 2009. The actual capital structure at June 30, 2009, showed a reduction of \$26,063,400 in Long-Term Debt and a reduction of \$220,000 in Preferred Stock from the structure in the Company filing and an increase in Common Equity of \$15,060,600.

The reduction in Long-Term Debt was due to the termination of a parts program agreement with General Electric Capital in June 2009, when the Company made its final payment on the parts and took full title. The reduction in Preferred Stock occurred from sinking fund payments on two series of preferred stock; however, the effect on the capital structure ratio was considerably less than a basis point. Common Equity increased because the actual equity from share plans in the second quarter of 2009 was \$2,384,744 more than estimated in the Company's filing and Retained Earnings in the second quarter were \$12,675,856. These changes resulted in an overall percentage increase of 0.35 in the Common Equity ratio to 49.69% and a corresponding nearly equal decline in the Long-Term Debt ratio to 48.38% with a very small decline in the proportion of Preferred Stock, which remains at 1.93%. ORS Attachment - 2 shows the updated capital structure as of June 30, 2009.

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## **ALLOCATION OF ADDITIONAL REVENUE REQUIREMENT**

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South Carolina Code §58-33-270(D) of the BLRA requires "... that the additional revenue requirement to be collected through revised rates shall be allocated among customer classes based on the utility's South Carolina firm peak demand data from the prior year." ORS verified that the Company used the summer firm peak demand day of August 6, 2008 along with the coincident class firm peaks to determine the appropriate percentages upon which to allocate the additional revenue requirements, as shown on Exhibit B of SCE&G's ARRR. The firm peak demand was based on the approved four-hour coincident peak allocation methodology and included the City of Orangeburg in the wholesale allocation portion. The City of Greenwood is the only firm wholesale customer of SCE&G during 2008 that was excluded from these allocations. Greenwood was excluded because it will no longer be a customer by the end of 2009. The appropriate South Carolina retail firm demand allocation of the system total is 95.70% as shown on Exhibit B of SCE&G's ARRR.

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## **RATE DESIGN**

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The BLRA provides that ... "In establishing revised rates, all factors, allocations, and rate designs shall be as determined in the utility's last rate order...." ORS examined the Company's proposed revised rates in this filing and found the rate designs are consistent with those approved in the Company's last general rate case in Commission Order No. 2007-855 issued under Docket No. 2007-229-E. There were no changes to the basic facilities charges for any of the residential rate schedules.

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## **REVENUE VERIFICATION**

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ORS verified the proposed revised rates in SCE&G's ARRR Exhibit F will generate the additional revenues by class as shown on SCE&G's Exhibit E. The total additional revenue generated of \$22,532,018 is slightly less than the targeted amount of \$22,533,100 shown on



Exhibit B of the ARRR. Each resulting class revenue amount is also less than the targeted amount. Since the general lighting schedules do not contribute to SCE&G's firm peak demand, those schedules of rates were not affected by the proposed revised rates and received no increase in charges. It is difficult to set rates to exactly produce precise dollar amounts due to the general complexity of rate designs of the various tariffs, their interdependent relationships, and the large number of billing determinants associated with these calculations. The commonly accepted practice is to adjust rates while maintaining the appropriate rate design and generate revenues close to the desired level without exceeding the targeted amount. SCE&G has accomplished this objective in this filing. The resulting overall proposed increase to the retail class (excluding lighting) is 1.10%.

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### **ORS'S REVIEW OF SCE&G'S QUARTERLY REPORT**

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As required by the BLRA, SCE&G submitted its first Quarterly Report ("Quarterly Report") on construction activities at its V.C. Summer Nuclear Station Units 2 & 3 on May 15, 2009. A full and exact copy is attached to SCE&G's ARRR filing as Exhibit A. ORS completed and produced a report describing its review of the Quarterly Report. ORS's review of the SCE&G Quarterly Report is attached as ORS Attachment - 3.

The Quarterly Report shows the progress SCE&G made in constructing access roads, preparing headquarters for construction crews, relocating and refurbishing rail access, and issuing major equipment purchase orders. Construction of the nuclear island has not commenced and will not commence until the issuance of the Nuclear Regulatory Commission's ("NRC") Construction and Operating License ("COL"). The COL is scheduled to be issued by the NRC no later than July 1, 2011.

SCE&G continues to manage the project for commercial operations dates ("COD") of April 1, 2016, for Unit 2 and January 1, 2019, for Unit 3. The schedules presented in the Quarterly Report continue to support these dates. However, SCE&G has made a number of schedule modifications which affect interim dates but, at this point, do not impact the CODs. On April 1, 2009, the Westinghouse, Shaw, Stone & Webster Group submitted to SCE&G the Performance

Measurement Baseline Schedule (“PMBS”). The PMBS is the integrated engineering, procurement and construction schedule. At this point, SCE&G integrated the EPC activities with the Milestone Schedule approved in Commission Order No. 2009-104(A). SCE&G subdivided the 123 milestones into 146 milestones in order to better represent the construction progress in a more detailed manner. Subsequent to filing the Quarterly Report, SCE&G filed for a revision to the Commission approved Milestone Schedule to formally recognize the expansion of the milestones and to adjust certain milestone dates. ORS has reviewed SCE&G’s filing in Docket 2009-293-E requesting an update to the Milestone Schedule as established in the Commission Order.

SCE&G further recognized that some large pieces of equipment could be delivered to the site well before the installation date. There was also a recognition that several pieces of equipment could be obtained early to achieve cost savings. Therefore, to avoid long storage periods on sensitive equipment and to take advantage of cost savings, SCE&G elected to shift forward or accelerate several activities (44 items) and shift several activities (41 items) into the future. This shifting resulted in a modified Milestone Schedule. These changes do not affect the CODs or the approved construction cost forecast. None of the modified milestones fall outside of the 18 to 24-month window as established in the Commission Order.

The Quarterly Report shows SCE&G and its contractors completed 28 milestones on schedule or ahead of schedule. The construction schedule and progress of SCE&G continues to support the CODs established in the Commission Order. The budget as approved in the Commission Order also continues to be met.

The next quarterly report due August 14, 2009, will be an important comparison as patterns and trends in the schedule and budget begin to evolve.

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## **BUDGET REVIEW**

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The budget for the construction and cumulative cash flow has experienced some adjustments due to the methodology for calculating inflation effects on several of the cost categories. The BLRA requires that inflation be shown using a 5-year averaging methodology. As a result of this

methodology and the high inflation in construction materials during this 5-year period, the projected cost of the Units shows a cost inflated to \$6.875 Billion from the original estimate of \$6.3 Billion. Using a 1-year or 10-year average inflation methodology shows the projected cost to be less than the original estimate. In both cases, the inflation impact would have resulted in negative pressure on the inflated dollars, (\$97.1 Million) and (\$172.3 Million), respectively. Accordingly, the forecast of construction, net of AFUDC, continues to be \$4.5 Billion.

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## CONCLUSION

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The purpose of the BLRA is to provide for the recovery of the prudently incurred costs associated with new base load plants when constructed by investor-owned electrical utilities, while at the same time protecting customers of investor-owned electrical utilities from responsibility for imprudent financial obligations or costs. ORS has reviewed the ARRR and conducted an on-site examination of the Company's books and records regarding the Company's capital expenditures and found them to be prudently incurred. Based on the information reviewed, ORS concludes that the project is being constructed in accordance with the construction schedules and cumulative cost forecasts approved in Commission Order No. 2009-104(A) and that the revised rates requested by SCE&G are appropriate as filed. Pursuant to S.C. Code Ann. §58-33-280(B), the CWIP not included in this filing shall continue to earn AFUDC and may be included in rates through future filings.

**South Carolina Office of Regulatory Staff**  
**2009 Revised Rates Filing Revenue Requirement**  
**Units 2 & 3 CWIP through June 2009**  
**(\$ in Thousands)**

	SCE&G Revised Rates Filing (A)	ORS Examination			
		Actual (B)	Allowable (C)	Difference (D) (A - B)	Carry Over (E) (B - C)
CWIP in Rates as of June 30, 2008 (per SC PSC Order No. 2009-104(A))	\$ 65,961	\$ 65,961	\$ 65,961	\$ -	\$ -
Incremental Actual Additions to CWIP through March 31, 2009	112,422	112,422	112,422	-	-
Incremental AFUDC through March 31, 2009	4,557	4,557	4,557	-	-
Incremental Additions to CWIP April 1, 2009 through June 30, 2009	79,246	88,180	79,530	(8,934)	8,650
Incremental AFUDC April 1 through June 30, 2009	2,976	1,855	1,855	1,121	-
CWIP as of June 30, 2009	<u>\$ 265,162</u>	<u>\$ 272,975</u>	<u>\$ 264,325</u>	<u>\$ (7,813)</u>	<u>\$ 8,650</u>
Incremental CWIP	\$ 199,201	<u>\$ 207,014</u>	<u>\$ 198,364</u>	<u>\$ (7,813)</u>	<u>\$ 8,650</u>
Gross Cost of Capital	<u>11.82%</u>				
Incremental Revenue Requirement	<u>\$ 23,546</u>				
Allocation Factor for Retail Operation	<u>95.70%</u>				
Allocated Retail Revenue Increase	<u>\$ 22,533</u>		<u>\$ 22,533</u>		

South Carolina Office of Regulatory Staff

Capitalization Ratios and Cost of Capital

**SOUTH CAROLINA ELECTRIC & GAS COMPANY/S.C. FUEL COMPANY  
REGULATORY CAPITALIZATION RATIOS FOR ELECTRIC OPERATIONS  
As of June 30, 2009**

	<u>Amount</u>	<u>Ratio</u>	<u>Embedded Cost</u>	<u>Weighted Average Cost of Capital</u>	<u>Gross of Tax</u>
Long-Term Debt	\$2,845,425,000	48.38%	5.73%	2.78%	2.78%
Preferred Stock	\$113,538,800	1.93%	6.43%	0.12%	0.20%
Common Equity	\$2,922,356,792	49.69%	11.00%	5.47%	8.89%
Total Capitalization	\$5,881,320,592			8.36%	11.87%

**SOUTH CAROLINA OFFICE OF REGULATORY STAFF'S  
MARCH 31, 2009 QUARTERLY REPORT  
ON THE BUDGET AND SCHEDULE OF  
V.C. SUMMER UNITS 2 & 3 CONSTRUCTION**

**SOUTH CAROLINA OFFICE OF REGULATORY STAFF'S  
REVIEW OF THE  
SOUTH CAROLINA ELECTRIC & GAS COMPANY  
MARCH 31, 2009 QUARTERLY REPORT  
ON THE  
BUDGET AND SCHEDULE  
OF  
V.C. SUMMER UNITS 2 & 3 CONSTRUCTION**



**JULY 14, 2009**

**SOUTH CAROLINA OFFICE OF REGULATORY STAFF'S  
REVIEW OF THE  
SOUTH CAROLINA ELECTRIC & GAS COMPANY  
MARCH 31, 2009 QUARTERLY REPORT**

South Carolina Electric & Gas Company ("SCE&G" or "the Company") submitted its first Quarterly Report ("Quarterly Report") on construction activities at its V.C. Summer Nuclear Station Units 2 & 3 ("VCS 2&3" or "Units 2 & 3") on May 15, 2009. The report covers the quarter ending March 31, 2009 and is submitted pursuant to S.C. Code Ann. § 58-33-277 of the Base Load Review Act ("BLRA"). The BLRA requires SCE&G to document the VCS 2 & 3 construction schedule, budget expenditures, completed activities, forecasts of activities to be completed and any revisions to the original schedule and budget.

There are two distinct schedules, (1) the Milestone Schedule and (2) the engineering, procurement and construction schedule, also known as the Performance Measurement Baseline Schedule ("PMBS"). The milestone schedule provided by SCE&G and adopted in Public Service Commission of South Carolina ("Commission") Order Number 2009-104A is composed of significant activities that provide an overall assessment of the construction progress. The Commission's Order allows Milestone Schedule deviations of up to 18 months without violating the Order. The Milestone Schedule is not designed to provide a detailed view of the PMBS.

SCE&G's Quarterly Report shows the overall construction is progressing in accordance with the Commission Order and allowed 18-month milestone deviation. A number of activities are currently within the 18-month deviation period. SCE&G's Quarterly Report also shows modifications are being made, and at this time, the impact on the schedule appears to be minimal and will not impact the overall completion date. While there is some available flexibility in the schedule that will allow opportunities to catch up, these early revisions are also indicators of a schedule that will require careful monitoring going forward, particularly given the fact that several of the milestones are close to the limit of the 18-month contingency. SCE&G will need to be particularly vigilant for future indications that the current schedule is too aggressive. It is not unusual for a construction schedule to have a shaking out or correcting period during the early stages of construction planning. The modifications cover three (3) main areas: 1) preliminary site preparation; 2) issuance of Purchase Orders ("PO"), and 3) continuing engineering and permitting. Although these activities are in their early stages, these schedule adjustments are cause for concern because of the limited flexibility that remains under the regulatory approved schedule. The schedule will require close scrutiny in the next several quarters to make certain that these issues do not continue.

While some milestone dates have moved forward in the schedule - which benefit the project - over 30 milestones have been changed to reflect a later completion date than originally planned. The moving of a milestone into the future does not necessarily signal a delay in the project but should nonetheless be carefully monitored. Even though milestone dates have moved forward and backward, SCE&G is currently on schedule to



accomplish substantial completion by April 2016 for Unit 2. It should be noted that actual nuclear construction is not scheduled to begin until after the Combined Operating License (“COL”) is awarded by the Nuclear Regulatory Commission (“NRC”) expected in July, 2011. The Milestone Schedule, including modifications, is included as Attachment 1.

Table 1 below summarizes the status of the Milestone Schedule as of March 31, 2009. Table 1 lists milestones completed on-time, early, completed within the 18-month deviation and milestones that are not complete. ORS will closely monitor all aspects of the Milestone Schedule to determine the extent and long-term impact, if any, that the milestone revisions may have on the substantial completion date of the project. In addition, if any future milestones are missed in the 2<sup>nd</sup> Quarterly Report (due forty-five days after June 30, 2009) then this may be an indicator of an overall scheduling problem. ORS will continually monitor the Milestone Schedule for signs of a more systemic issue.

Table 1: Summary of the SCE&G Milestone Schedule

ACTUAL: Period of 2009-1Q and before (33 Milestones Total)

Milestones Completed on Schedule: 13 or 39.3%

Milestones Completed Early: 4 or 12.2%

Milestones Completed Within 18 Mos. Deviation: 9 or 27.3%

Milestones Projected to Be Completed Within 18-Mos. Deviation: 7 or 21.2%

Milestones Outside 18 Mos. Deviation: 0

PROJECTED: Period of 2009-2Q and after (113 Milestones Total)

Milestones Completed Early: 2 or 1.7%

Milestones Projected Completion on Schedule: 39 or 34.5%

Milestones Projected Completion Early: 45 or 39.9%

Milestones Projected Completed Within 18-Mos. Deviation: 27 or 23.9%

**Note: Currently, SCE&G lists a total of 146 milestones.**

Modifications in the current version of the Milestone Schedule do not, at this time, indicate the need to revise the Commercial Operation Date (“COD”) of Unit 2 or Unit 3. However, there are a number of activities that will be occurring in the next 2 or 3 Quarters that could have long term schedule implications if not completed on schedule, such as the completion of the railroad reroute, award of the PO for the Unit 2 Assembly

Pad, and the continued support of the COL application process. While these activities are currently on schedule, future modification in the schedules for these activities may have an impact on the Unit 2 & 3 COD.

The PMBS once set for delivery in late 2008, was completed and delivered in Spring 2009. The PMBS establishes the detailed completion dates, compliance dates for payments and critical dates for completion of certain activities prior to the start of other activities. ORS's analysis of the critical path activities on this schedule does not indicate an issue with substantial completion. It is critical for overall performance review that the Milestone Schedule and PMBS be integrated from one Quarterly report to the next.

ORS's review of the current actual budget versus comparison with the approved budget shows a number of deviations in all categories. The deviations, however, are in compliance with the Commission Order. The budget for SCE&G's portion of Units 2 & 3 was forecasted at \$6.3 Billion, including escalation and estimated contingencies. SCE&G's Quarterly Report shows a budget revision to \$6.875 Billion as of March 31, 2009. The budget modification is mainly driven by an increase in estimated escalation. The total increase in the Gross Construction cost is \$561,939,000. The largest share of this increase, \$510 Million, is attributable to estimated escalation. This \$510 Million escalation increase is comprised of two major factors, a shifting of some capital cost items into the future, \$118 Million, and changes in the escalation rates, \$392 Million. \$51 million of the Gross Construction amount is related to AFUDC.

Pursuant to the BLRA, the Quarterly Report shows the Gross Construction costs based on a 5-year average of current inflation. SCE&G states and ORS agrees that the increase in Gross Construction costs is primarily due to construction escalation during the last 5 years which has been higher than average due to escalation in building materials costs. The 5-year rates for construction materials have been in the 7% - 8.6% range. In contrast, escalation in these materials during the prior year has been significantly less than the 5-year average at approximately 4.8%. If the Gross Construction costs were evaluated on an annual basis, the budgeted cost for Units 2 & 3 would decrease by \$97 Million from the budget approved in Order No. 2009-104A. Also, using a ten-year average instead of a 5-year average, the Gross Construction cost would be reduced by \$172 Million, both net of Allowance for Funds Used During Construction ("AFUDC").

As shown above, the Gross Construction cost is sensitive to escalation rates. It is reasonable and prudent to monitor the Gross Construction costs based on trends that are longer and shorter than the 5-year requirement of the BLRA. In addition, the construction period of this project is closer to a 10-year program which substantiates the need to look at not only the 5-year range but the 10-year range, as well.

If the current economic trends in the Southeast extend downward pressure on the costs of construction and construction related materials, the overall cost of SCE&G's portion of VCS Units 2 & 3 will remain at or below the \$6.3 Billion approved in the Commission's Order. However, it is believed by most econometric forecasters that as the economy gains positive traction in late 2009 and 2010, so will inflation. It is very

important that SCE&G make appropriate purchasing decisions to avoid inflationary influences on the overall cost of VCS Units 2 & 3.

Basic budget and schedule tracking in the Quarterly Report is adequate for comparison to conditions approved in the Commission Order. However, there are significant inputs to the various sections that require substantiation rather than acceptance at face value. For example, SCE&G reports that the AFUDC rate has increased from 5.52% to 8.08% in the Quarterly Report. SCE&G further suggests that the AFUDC rate will decrease to 5.87% “as capital markets recover.” AFUDC is a factor of market interest rates, embedded cost of capital, capitalization ratios, Construction Work in Process (“CWIP”), and outstanding short-term debt. This should be further detailed in subsequent Quarterly Reports to aid in making proper decisions about the current financial status of the project.

In addition to providing direct methodology for tracking the AFUDC rate, SCE&G should be prepared to provide specific details when the movement of a milestone negatively impacts the project. In a construction project of this magnitude, ORS expects forward and backward movement of milestones. SCE&G should provide specific details when the movement of a milestone negatively impacts the critical path for substantial completion. If such events occur, then SCE&G should explain the cause of the adjustment. SCE&G also should document the corrective action taken to mitigate the pricing effect and schedule impact. These details will provide a record of the modifications and support a better understanding of the near-term and long-term impacts to schedule and budget.

The Company’s Quarterly Report identifies the PMBS and related “owners’ costs and *other items*” as affecting the project’s cash flow. As this project moves forward and expenditures begin to reach well into the billions of dollars, the Company should report every detail that impacts the cash flow and Gross Construction cost, whether it is an actual cost adjustment or a schedule adjustment that creates a cost modification. It is not sufficient to merely state that cost impacts are due to schedule modifications or changes in owner’s costs.

The Quarterly Report budget indicates a change in the annual expenditures from the original budget. This revised budget illustrates a larger “backend” scheduling of construction expenditures relative to the initial schedule. The overall schedule modification is illustrated by payments being shifted further into the future for each cost category. While these payments and costs are shifting into later years of the construction schedule, the substantial completion dates remain the same, April 2016 and January 2019. However, this trend cannot continue without exposure to delays in the COD. SCE&G should prepare and submit along with its next Quarterly Report and all subsequent reports a detailed “Schedule and Cost Impact Analysis.” This analysis should address all major construction components, modular construction activities and each schedule modification that creates a cost impact.

Activity schedule shifts are a critical monitoring point that must be an on-going activity, not a “snap shot” type of monitoring. Schedule shifts create not only issues with project coordination between various phases but also directly impacts the overall budget. A snapshot monitoring process may lead to sudden realizations of cost and schedule issues that require significant efforts to resolve.

In conclusion the Quarterly Report shows SCE&G complied with the requirements of the BLRA and the Commission’s Order; however, additional and substantiating information should be included with future Quarterly Reports.

## OVERVIEW

- SCE&G’s Quarterly Report shows revisions are being made to the Milestone Schedule. While some Milestone dates have moved forward resulting in benefits to the project, some Milestone dates have been pushed into the future and delivery of some of the substantial forgings and other critical components are included in this modification. SCE&G indicates that this is a result of the creation of the first fully integrated project schedule by its contractors and is not a trend. If these changes do indicate a pattern, then a trend of this sort this early in the project is cause for concern. It is noted the Company affirmed that the current modifications are within the 18-month period allowed by the Commission Order. These changes have been characterized by SCE&G as not affecting the COD of either Unit 2 or 3.
- Activities associated with the Nuclear Regulatory Commission’s issuance of the Combined Operating License appear to be continuing on schedule to meet the mid 2011 date.
- Permitting activities for external construction permits such as U.S. Army Corps of Engineers 404 Permit, State of South Carolina Wetlands, NPDES and Erosion Control continue on schedule for issuance as needed.
- The overall construction budget has increased from the original budget mainly due to the change in escalation and contingency escalation rates. This increase is allowed by the Commission’s Order. However, as the capital markets rebound from the current economic conditions and old inflation factors are rolled out of the 5-year averaging picture, it is anticipated the construction budget will actually decrease in the near term. It is not expected that this will be the case for the entire construction period.
- While the budget itself is seeing an increase due to escalation, the annual expenditures are being shifted further out from the schedule presented in the BLRA hearing.
- SCE&G’s next quarterly report is due 45 days after June 30, 2009 or no later than August 14, 2009.

**Attachment 1 - ORS Review  
MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
1	Approve Engineering, Procurement and Construction Agreement	8-2Q	8-2Q	N/A	No	No	5/23/2008	Comp on Schdl	-
2	Issue PO's to Nuclear Component Fabricators for Units 2 and 3 Containment Vessels	8-2Q	8-2Q	8-4Q	No	No	12/3/2008	Comp in 18 Mo Dev	2Q
3	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator – First Payment - Unit 2	8-2Q	8-2Q	8-3Q	No	No	8/31/2008	Comp in 18 Mo Dev	1Q
4	Contractor Issue PO to Accumulator Tank Fabricator – Unit 2	8-2Q	8-2Q	8-3Q	No	No	7/31/2008	Comp in 18 Mo Dev	1Q
5	Contractor Issue PO to Core Makeup Tank Fabricator - Units 2 & 3	8-2Q	8-2Q	8-3Q	No	No	9/30/2008	Comp in 18 Mo Dev	1Q
6	Contractor Issue PO to Squib Valve Fabricator- Units 2 & 3	8-2Q	8-2Q	09-1Q	No	No	3/31/2009	Comp in 18 Mo Dev	3Q
7	Contractor Issue PO to Steam Generator Fabricator - Units 2 & 3	8-2Q	8-2Q	N/A	No	No	6/30/2008	Comp on Schdl	-
8	Contractor Issue Long Lead Material PO to Reactor Coolant Pump Fabricator - Units 2 & 3	8-2Q	8-2Q	N/A	No	No	6/30/2008	Comp on Schdl	-
9	Contractor Issue PO to Pressurizer Fabricator - Units 2 & 3	8-2Q	8-2Q	8-3Q	No	No	8/31/2008	Comp in 18 Mo Dev	1Q
10	Contractor Issue PO to Reactor Coolant Loop Pipe Fabricator - First Payment- Units 2 & 3	8-2Q	8-2Q	N/A	No	No	6/30/2008	Comp on Schdl	-
11	Reactor Vessel Internals – Issue Long Lead Material PO to Fabricator Units 2 and 3	8-2Q	8-2Q	8-4Q	No	No	11/21/2008	Comp in 18 Mo Dev	2Q
12	Contractor Issue Long Lead Material PO to Reactor Vessel Fabricator - Units 2 & 3	8-2Q	8-2Q	N/A	No	No	6/30/2008	Comp on Schdl	-
13	Contractor Issue PO to Integrated Head Package Fabricator - Units 2 & 3	8-2Q	8-2Q	9-3Q	No	No		Proj in 18 Mo Dev	5Q
14	Control Rod Drive Mechanism Issue PO for Long Lead Material to Fabricator - Units 2 and 3 – First Payment	8-2Q	8-2Q	N/A	No	No	6/21/2008	Comp on Schdl	-
15	Issue PO's to Nuclear Component Fabricators for Nuclear Island Structural CA20 Modules	8-2Q	8-2Q	9-3Q	No	No		Proj in 18 Mo Dev	5Q
16	Start Site Specific and Balance of Plant Detailed Design	8-3Q	8-3Q	8-2Q	No	No	6/23/2008	Comp Early	1Q
17	Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3	8-3Q	8-3Q	8-4Q	No	No	10/31/2008	Comp in 18 Mo Dev	1Q
18	Steam Generator - Issue Final PO to Fabricator for Units 2 & 3	8-3Q	8-3Q	8-2Q	No	No	6/30/2008	Comp Early	1Q

**Attachment 1 - ORS Review  
MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
19	RVI - Contractor Issue PO for Long Lead Material (Heavy Plate and Heavy Forgings) to Fabricator - Units 2 & 3	8-3Q	8-3Q	10-1Q	No	No		Proj in 18 Mo Dev	6Q
20	Contractor Issue Final PO to Reactor Vessel Fabricator - Units 2 & 3	8-3Q	8-3Q	N/A	No	No	9/30/2008	Comp on Schdl	-
21	Variable Frequency Drive Fabricator Issue Transformer PO - Units 2 & 3	8-3Q	8-3Q	9-2Q	No	No		Proj in 18 Mo Dev	3Q
22	Start Clearing, Grubbing and Grading	8-4Q	8-4Q	9-1Q	No	No	1/26/2009	Comp in 18 Mo Dev	1Q
23	Core Makeup Tank Fabricator Issue Long Lead Material PO - Units 2 & 3	8-4Q	8-4Q	N/A	No	No	10/31/2008	Comp on Schdl	-
24	Acumulator Tank Fabricator Issue Long Lead Material PO - Units 2 & 3	8-4Q	8-4Q	N/A	No	No	10/31/2008	Comp on Schdl	-
25	Pressurizer Fabricator Issue Long Lead Material PO - Units 2 & 3	8-4Q	8-4Q	N/A	No	No	10/31/2008	Comp on Schdl	-
26	Reactor Coolant Loop Pipe - Contractor Issue PO to Fabricator - Second Payment - Units 2 & 3	8-4Q	8-4Q	09-2Q	No	No		Proj in 18 Mo Dev	2Q
27	Integrated Head Package - Issue PO to Fabricator - Units 2 & 3 - Second payment	8-4Q	8-4Q	9-3Q	No	No		Proj in 18 Mo Dev	3Q
28	Control Rod Drive Mechanism - Contractor Issue PO for Long Lead Material to Fabricator - Units 2 & 3	8-4Q	8-4Q	08-2Q	No	No	6/30/2008	Comp Early	2Q
29	Contractor Issue PO to Passive Residual Heat Removal Exchanger Fabricator - Second Payment - Units 2 & 3	8-4Q	8-4Q	N/A	No	No	10/31/2008	Comp on Schdl	-
30	Start Parr Road Intersection Work	9-1Q	9-1Q	N/A	No	No	2/16/2009	Comp on Schdl	-
31	Reactor Coolant Pump - Issue Final PO to Fabricator - Units 2 & 3	9-1Q	9-1Q	8-2Q	No	No	6/30/2008	Comp Early	3Q
32	Integrated Heat Packages Fabricator Issue Long Lead Material PO - Units 2 & 3	9-1Q	9-1Q	9-4Q	No	No		Proj in 18 Mo Dev	3Q
33	Design Finalization Payment 3	9-1Q	9-1Q	N/A	No	No	1/31/2009	Comp on Schdl	
34	Start Site Development	9-2Q	9-2Q	8-2Q	No	No	6/23/2008	Comp Early	4Q
35	Contractor Issue PO to Turbine Generator Fabricator - Units 2 & 3	09-2Q	09-2Q	09-1Q	No	No	2/17/2009	Comp Early	1Q
36	Contractor Issue PO to Main Transformers Fabricator - Units 2 & 3	09-2Q	09-2Q	09-3Q	No	No		Proj in 18 Mo Dev	1Q

Attachment 1 - ORS Review MILESTONE SCHEDULE									
	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
37	Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3	09-2Q	09-2Q	10-4Q	No	No		Proj in 18 Mo Dev	6Q
38	Design Finalization Payment 4	09-2Q	09-2Q	N/A	No	No		Proj on Schdl	
39	Turbine Generator Fabricator Issue PO for Condenser Material - Unit 2	9-3Q	9-3Q	N/A	No	No		Proj on Schdl	
40	Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3	9-3Q	9-3Q	09-2Q	No	No		Proj Early	1Q
41	Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3	9-3Q	9-3Q	10-2Q	No	No		Proj in 18 Mo Dev	3Q
42	Design Finalization Payment 5	9-3Q	9-3Q	N/A	No	No		Proj on Schdl	
43	Start Erection of Construction Buildings, to Include Craft Facilities for Personnel, Tools, Equipment; First Aid Facilities; Field Offices for Site Management and Support Personnel; temporary warehouses; and construction hiring office	9-4Q	9-4Q	09-3Q	No	No		Proj Early	1Q
44	Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2	9-4Q	9-4Q	09-3Q	No	No		Proj Early	1Q
45	Design Finalization Payment 6	9-4Q	9-4Q	N/A	No	No		Proj on Schdl	
46	Instrumentation and Control/Simulator - Contractor Issue PO to Subcontractor for Rad Monitor Sys - Units 2 & 3	9-4Q	9-4Q	N/A	No	No		Proj on Schdl	
47	Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	10-1Q	10-1Q	11-2Q	No	No		Proj in 18 Mo Dev	5Q
48	Turbine Generator Fabricator Issue PO for Moisture Separator Reheater/Feedwater Heater Material Unit 2	10-1Q	10-1Q	10-2Q	No	No		Proj in 18 Mo Dev	1Q
49	Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2	10-1Q	10-1Q	10-2Q	No	No		Proj in 18 Mo Dev	1Q
50	Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2	10-2Q	10-2Q	11-4Q	No	No		Proj in 18 Mo Dev	6Q
51	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2	10-2Q	10-2Q	9-2Q	No	No		Proj Early	4Q
52	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2	10-2Q	10-2Q	10-4Q	No	No		Proj in 18 Mo Dev	2Q



**Attachment 1 - ORS Review  
MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
53	Start Excavation and Foundation Work for the Standard Plant for Unit 2	10-3Q	10-3Q	10-1Q	No	No		Proj Early	2Q
54	Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2	10-3Q	10-3Q	10-1Q	No	No		Proj Early	2Q
55	Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion – Unit 2	10-3Q	10-3Q	10-1Q	No	No		Proj Early	2Q
56	Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2	10-3Q	10-3Q	10-2Q	No	No		Proj Early	1Q
57	Complete Preparations for Receiving the First Module on Site for Unit 2	10-4Q	10-4Q	10-3Q	No	No		Proj Early	1Q
58	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2	10-4Q	10-4Q	10-2Q	No	No		Proj Early	2Q
59	Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion of Unit 2	10-4Q	10-4Q	N/A	No	No		Proj on Schdl	
60	Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non-Destructive Testing Completion - Unit 2	10-4Q	10-4Q	N/A	No	No		Proj on Schdl	
61	Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2	11-1Q	11-1Q	11-2Q	No	No		Proj in 18 Mo Dev	1Q
62	Polar Crane Fabricator Issue PO for Main Hoist Drum and Wire Rope - Units 2 & 3	11-1Q	11-1Q	N/A	No	No		Proj on Schdl	
63	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3	11-2Q	11-2Q	N/A	No	No		Proj on Schdl	-
64	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship – Unit 2	11-2Q	11-2Q	11-4Q	No	No		Proj in 18 Mo Dev	2Q
65	Start Placement of Mud Mat for Unit 2	11-3Q	11-3Q	N/A	No	No		Proj on Schdl	
66	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2	11-3Q	11-3Q	11-1Q	No	No		Proj Early	2Q
67	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	11-3Q	11-3Q	10-4Q	No	No		Proj Early	3Q
68	Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3	11-3Q	11-3Q	12-1Q	No	No		Proj in 18 Mo Dev	2Q



Attachment 1 - ORS Review MILESTONE SCHEDULE									
	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
69	Begin Unit 2 First Nuclear Concrete Placement	11-4Q	11-4Q	N/A	No	No		Proj on Schdl	
70	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2	11-4Q	11-4Q	11-3Q	No	No		Proj Early	1Q
71	Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	11-4Q	11-4Q	11-2Q	No	No		Proj Early	2Q
72	Steam Generator Fabricator Notice to Contractor of Completion of 1st S/G Tubing Installation - Unit 2	11-4Q	11-4Q	11-2Q	No	No		Proj Early	2Q
73	Reactor Coolant Loop Pipe - Shipment of Equipment to Site - Unit 2	11-4Q	11-4Q	12-4Q	No	No		Proj in 18 Mo Dev	4Q
74	Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Trabel Housing) to Head Supplier - Unit 2	11-4Q	11-4Q	N/A	No	No		Proj on Schdl	-
75	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	11-4Q	11-4Q	10-4Q	No	No		Proj Early	4Q
76	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2	11-4Q	11-4Q	11-2Q	No	No		Proj Early	2Q
77	Design Finalization Payment 14	11-4Q	11-4Q	N/A	No	No		Proj on Schdl	
78	Set Module CA04 for Unit 2	12-1Q	12-1Q	12-1Q	No	No		Proj on Schdl	-
79	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2	12-1Q	12-1Q	10-2Q	No	No		Proj Early	7Q
80	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Completion of Tubing - Unit 2	12-1Q	12-1Q	11-1Q	No	No		Proj Early	4Q
81	Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2	12-1Q	12-1Q	N/A	No	No		Proj on Schdl	
82	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3	12-1Q	12-1Q	13-3Q	No	No		Proj in 18 Mo Dev	6Q
83	Set Containment Vessel Ring #1 for Unit 2	12-2Q	12-2Q	N/A	No	No		Proj on Schdl	
84	Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2	12-2Q	12-2Q	12-1Q	No	No		Proj Early	1Q
85	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3	12-2Q	12-2Q	13-3Q	No	No		Proj in 18 Mo Dev	5Q

**Attachment 1 - ORS Review  
MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
86	Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3	12-2Q	12-2Q	12-3Q	No	No		Proj in 18 Mo Dev	1Q
87	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3	12-2Q	12-2Q	13-1Q	No	No		Proj in 18 Mo Dev	3Q
88	Set Nuclear Island Structural Module CA03 for Unit 2	12-3Q	12-3Q	N/A	No	No		Proj on Schdl	
89	Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2	12-3Q	12-3Q	12-2Q	No	No		Proj Early	1Q
90	Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	12-3Q	12-3Q	12-4Q	No	No		Proj in 18 Mo Dev	1Q
91	Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2	12-3Q	12-3Q	N/A	No	No		Proj on Schdl	
92	Start Containment Large Bore Pipe Supports for Unit 2	12-4Q	12-4Q	12-2Q	No	No		Proj Early	2Q
93	Integrated Head Package - Shipment of Equipment to Site - Unit 2	12-4Q	12-4Q	N/A	No	No		Proj on Schdl	
94	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2	12-4Q	12-4Q	N/A	No	No		Proj on Schdl	
95	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3	12-4Q	12-4Q	13-2Q	No	No		Proj in 18 Mo Dev	2Q
96	Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Steam Generator Hydrotest - Unit 2	12-4Q	12-4Q	12-2Q	No	No		Proj Early	2Q
97	Start Concrete Fill of Nuclear Island Structural Modules CA01 and CA02 for Unit 2	13-1Q	13-1Q	N/A	No	No		Proj on Schdl	
98	Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2	13-1Q	13-1Q	12-2Q	No	No		Proj Early	3Q
99	Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2	13-1Q	13-1Q	N/A	No	No		Proj on Schdl	
100	Deliver Reactor Vessel Internals to Port of Export - Unit 2	13-1Q	13-1Q	13-2Q	No	No		Proj in 18 Mo Dev	1Q
101	Set Unit 2 Containment Vessel Ring #3." Adding "Ring #3	13-2Q	13-2Q	N/A	No	No		Proj on Schdl	-

**Attachment 1 - ORS Review  
MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
102	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 2	13-2Q	13-2Q	13-1Q	No	No		Proj Early	1Q
103	Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2	13-2Q	13-2Q	N/A	No	No		Proj on Schdl	
104	Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	13-2Q	13-2Q	14-1Q	No	No		Proj in 18 Mo Dev	3Q
105	Polar Crane - Shipment of Equipment to Site - Unit 2	13-2Q	13-2Q	N/A	No	No		Proj on Schdl	
106	Receive Unit 2 Reactor Vessel on Site from Fabricator	13-2Q	13-2Q	N/A	No	No		Proj on Schdl	
107	Set Unit 2 Reactor Vessel	13-3Q	13-3Q	13-2Q	No	No		Proj Early	1Q
108	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3	13-3Q	13-3Q	13-4Q	No	No		Proj in 18 Mo Dev	1Q
109	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3	13-3Q	13-3Q	14-3Q	No	No		Proj in 18 Mo Dev	4Q
110	Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2	13-3Q	13-3Q	N/A	No	No		Proj on Schdl	-
111	Place First Nuclear Concrete for Unit 3	13-3Q	13-3Q	N/A	No	No		Proj on Schdl	
112	Set Unit 2 Steam Generator	13-4Q	13-4Q	13-3Q	No	No		Proj Early	1Q
113	Main Transformers Ready to Ship - Unit 2	13-4Q	13-4Q	N/A	No	No		Proj on Schdl	
114	Complete Unit 3 Steam Generator Hydrotest at Fabricator	13-4Q	13-4Q	14-1Q	No	No		Proj in 18 Mo Dev	1Q
115	Set Unit 2 Containment Vessel Bottom Head on Basemat Legs	13-4Q	13-4Q	13-3Q	No	No		Proj Early	1Q
116	Set Unit 2 Pressurizer Vessel	14-1Q	14-1Q	N/A	No	No		Proj on Schdl	
117	Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3	14-1Q	14-1Q	15-1Q	No	No		Proj in 18 Mo Dev	4Q
118	Deliver Reactor Vessel Internals to Port of Export - Unit 3	14-1Q	14-1Q	15-2Q	No	No		Proj in 18 Mo Dev	5Q

**Attachment 1 - ORS Review  
MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
119	Main Transformers Fabricator Issue PO for Material - Unit 3	14-1Q	14-1Q	14-2Q	No	No		Proj in 18 Mo Dev	1Q
120	Complete Welding of Unit 2 Passive Residual Heat Removal System Piping	14-2Q	14-2Q	14-1Q	No	No		Proj Early	1Q
121	Steam Generator Contractor Acceptance of Equipment at Port of Entry - Unit 3	14-2Q	14-2Q	15-2Q	No	No		Proj in 18 Mo Dev	4Q
122	Refueling Mach - Shipment of Equipment to Site - Unit 3	14-2Q	14-2Q	N/A	No	No		Proj on Schdl	
123	Set Unit 2 Polar Crane	14-3Q	14-3Q	14-2Q	No	No		Proj Early	1Q
124	Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3	14-3Q	14-3Q	15-2Q	No	No		Proj in 18 Mo Dev	3Q
125	Main Transformers Ready to Ship - Unit 3	14-3Q	14-3Q	N/A	No	No		Proj on Schdl	
126	Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3	14-4Q	14-4Q	N/A	No	No		Proj on Schdl	
127	Start Electrical Cable Pulling in Unit 2 Auxiliary Building	15-1Q	15-1Q	N/A	No	No		Proj on Schdl	
128	Complete Unit 2 Reactor Coolant System Cold Hydro	15-1Q	15-1Q	15-3Q	No	No		Proj in 18 Mo Dev	2Q
129	Activate Class IE DC Power in Unit 2 Auxiliary Building.	15-2Q	15-2Q	15-1Q	No	No		Proj Early	1Q
130	Complete Unit 2 Hot Functional Test	15-3Q	15-3Q	N/A	No	No		Proj on Schdl	
131	Install Unit 3 Ring 3 for Containment Vessel	15-3Q	15-3Q	N/A	No	No		Proj on Schdl	
132	Load Unit 2 Nuclear Fuel	15-4Q	15-4Q	N/A	No	No		Proj on Schdl	
133	Unit 2 Substantial Completion	16-1Q	16-1Q	16-2Q	No	No		Proj in 18 Mo Dev	1Q
134	Set Unit 3 Reactor Vessel	16-2Q	16-2Q	15-4Q	No	No		Proj Early	2Q
135	Set Unit 3 Steam Generator #2	16-3Q	16-3Q	16-1Q	No	No		Proj Early	2Q
136	Set Unit 3 Pressurizer Vessel	16-4Q	16-4Q	16-2Q	No	No		Proj Early	2Q

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MILESTONE SCHEDULE**

	Milestone	2008 Year/ Quarter Expectation	2009 Year/Quarter Expectation		Outside 18 - 24 Month Contingency	Substantial Completion Date Impact	Completion Date	Status	Quarters Away from Expected Completion
			Original	Revised					
137	Complete Welding of Unit 3 Passive Residual Heat Removal System Piping	17-1Q	17-1Q	16-2Q	No	No		Proj Early	3Q
138	Set Unit 3 Polar Crane	17-2Q	17-2Q	16-3Q	No	No		Proj Early	3Q
139	Start Unit 3 Shield Building Roof Slab Rebar Placement	17-3Q	17-3Q	17-1Q	No	No		Proj Early	2Q
140	Start Unit 3 Auxiliary Building Electrical Cable Pulling	17-4Q	17-4Q	17-2Q	No	No		Proj Early	2Q
141	Activate Unit 3 Auxiliary Building Class 1E DC Power	18-1Q	18-1Q	17-2Q	No	No		Proj Early	3Q
142	Complete Unit 3 Reactor Coolant System Cold Hydro	18-2Q	18-2Q	18-1Q	No	No		Proj Early	1Q
143	Complete Unit 3 Hot Functional Test	18-2Q	18-2Q	18-1Q	No	No		Proj Early	1Q
144	Complete Unit 3 nuclear fuel load	18-3Q	18-3Q	N/A	No	No		Proj on Schdl	
145	Begin Unit 3 Full Power Operation	18-4Q	18-4Q	19-1Q	No	No		Proj Early	1Q
146	Unit 3 Substantial Completion	19-1Q	19-1Q	N/A	No	No		Proj on Schdl	-